Designing persuasive games through competition

Conference or Workshop Item

Designing persuasive games through competition

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Case Study

This case study describes a game design competition that was influenced by participatory design. We consider how successful our approach was and discuss the tensions that arose during the design and evaluation process.

The CHI+MED project investigates ways to improve safety within healthcare. In this context, we have been exploring different mediums for public engagement e.g. social media, games. Errordiary, a twitter hashtag for sharing day-to-day errors, has grown to become a public engagement portal for human error and related topics. As an interactive way to raise awareness of human error research within the context of healthcare, we held a game design competition for the Errordiary website (Figure 1). Teams of students were challenged to develop a game that inspired curiosity and reflection on human error and blame culture e.g. that got players thinking about how individuals can get blamed when the wider system is at fault.

Figure 1: Errordiary discovery zone website

In order to facilitate the engagement of teams and ensure the games reflected appropriate understandings of the competition themes, we adopted a format that was influenced by participatory approaches to design. The competition started with a kick-off event where experts presented on human error, blame culture, health care and game design. This was followed by a Q&A session and a game design workshop (Figure 2). The event emphasis was on bringing designers together with domain experts to ensure that students would be given relevant information from research and practice for their games. Kelty et al., (2014) argue that on of the key dimensions of participation is the "educative dividend that might result" (p. 7). We wanted our participants to learn, not only about the competition topics, but also about user-centred design approaches, working in teams and developing games for serious purposes. The experts also learnt from taking part, particularly in relation to the topics they were less aware of and from discussing potential game ideas.

Figure 2: Game design workshop

The competition was facilitated through a website with further sources of information (e.g. games, articles about nursing). The students also had the opportunity to discuss issues with the experts through the Errordiary forums, though unfortunately this did not occur. This might be due to the general lack of activity on the forum, though perhaps the teams did not feel they needed to engage in further discussion. However, the submission forms and the presentations at the final prize-giving, indicated that the teams engaged with many of the resources on the website and followed a user-centred approach to design.

Teams had two months in which to design, build and submit their games. An evaluation was carried out establish the winners and assess whether the games were suitable to share online, using a combination of expert judging and play-testing (conducted by the competition chair). Participants were also sent questions via email two days after the sessions to investigate whether any of the

games had “lingered” with them (Marsh & Costello, 2013). Four teams submitted to the competition, with each game illustrating a different approach to the brief. Prizes were awarded at a final showcase and the entries are now hosted online at: bit.ly/ErrorGames.

Discussion

As competition organisers, we hoped that the competition would result in a game that we could host online as a way of engaging the wider public in our research. We were not disappointed. The extent to which the teams engaged with the competitions topics and operationalised them was impressive. For instance, the winning entry, *Nurse’s Dilemma* (Figure 3), focused on blame culture through creating an emotionally compelling experience of what’s it like to deal with conflicting demands as a nurse. The emphasis was on exposing tensions within the underlying system that affect individuals. The runner-up, *St. Error Hospital* (Figure 4), was a simulation of a ward where the player takes on a management role to maintain a budget, train and direct staff, organise storage and implement resilience strategies to reduce error.

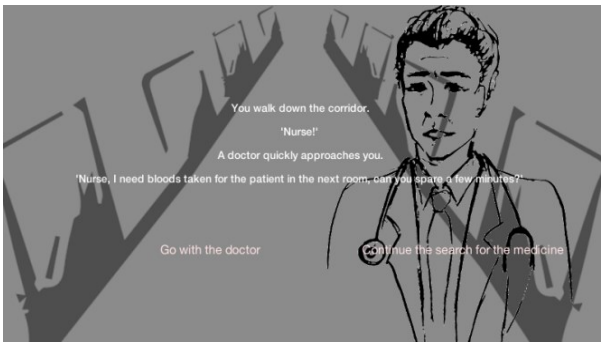

Figure 3: Nurse's Dilemma

However, various challenges emerged during the competition. The first related to a potential tension around how the teams interpreted various concepts. For example, in academic terms, resilience strategies are informal strategies developed by individuals rather than procedures implemented by management. Another challenge involved having to reconcile different opinions. For instance, one judge was concerned that *Nurse’s Dilemma* was somewhat over the top in terms of how it depicted working in a hospital and a couple of the play-testers questioned how likely the experience was. However, another of the judges who was a nurse and her colleague who had also played the game both agreed it was a realistic interpretation of at least some of their own experience.

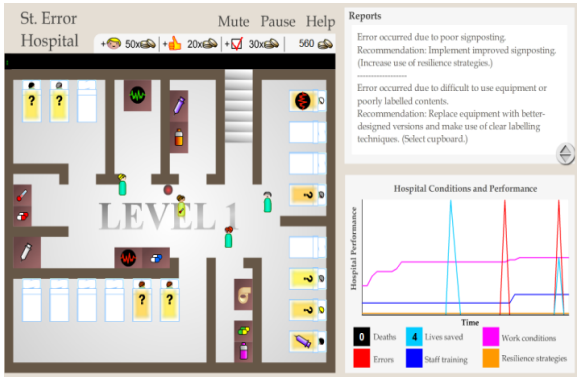

Figure 4: St. Error Hospital

One interpretation of these tensions is that more meaningful expert involvement in the design process is required to ensure that student designers can create an accurate representation of the

problem area. To make the approach more participative, we could have fed back the comments from judges and play-testers to the designers to allow for a further design iteration, though unfortunately time constraints meant this was not possible. However, the aim of the games was not necessarily to deliver a particular learning outcome but to inspire reflection and curiosity around the competition themes. Another interpretation is perhaps that designers should be allowed to take a little artistic licence in order to communicate a particular message or experience. In the case of *Nurse's Dilemma*, regardless of debate between the judges about the accuracy of the portrayal, the game was most likely to achieve the competition goal. In addition, the approach we adopted illustrated that the designers not only experienced empathy with nurses but were able to communicate this to players. The game serves as an example of how participatory approaches have the potential to foster empathy amongst both designers and users of technology (Lindsay et al., 2012). While tensions did occur, the format we adopted allowed the teams to approach the competition challenge in creative ways, whilst being inspired by expert accounts.

References

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